USER MANUAL

MST2 Mobile Shield

Patent Pending

Manufactured by:

Cellular Materials International, Inc.
1201 Five Springs Rd.
Charlottesville, VA 22902
info@cellularmaterials.com

Distributor:

Nationwide Structures, Inc.
P.O. Box 55461
Virginia Beach, VA 23471
Ph: 888-430-0301 Fax: 757-464-2787
gail@nationwidestructures.com

Capability Chart:

National Institute of Justice (NIJ) Standard 0101.04
Ballistic Test Chart

NIJ Certified – US NIJ Standard 0101.04 is a standard for Ballistic Resistance of Police Body Armor developed by the law enforcement standards laboratory of the National Institute of Justice (NIJ), US Department of Justice, Washington DC.

Armor Type	Test Round	Test Bullet	Bullet Weight/Grain	Reference Velocity	Max Backface Deformation
I	1	.22 Caliber LR LRN	2.6 g/40 gr.	1080±30 ft/s (329±10 m/s)	1.73 in (44 mm)
	2	.380 ACP FMJ RN	6.2 g/95 gr.	1055±30 ft/s (322±10 m/s)	1.73 in (44 mm)
IIA	1	9 mm FMJ RN	8.0 g/124 gr.	1120±30 ft/s (341±10 m/s)	1.73 in (44 mm)
	2	40 S&W FMJ	11.7 g/180 gr.	1055±30 ft/s (322±10 m/s)	1.73 in (44 mm)
II	1	9 mm FMJ RN	8.0 g/124 gr.	1205±30 ft/s (367±10 m/s)	1.73 in (44 mm)
	2	.357 Mag JSP	10.2 g/158 gr.	1430±30 ft/s (436±10 m/s)	1.73 in (44 mm)
IIIA	1	9 mm FMJ RN	8.2 g/124 gr.	1430±30 ft/s (436±10 m/s)	1.73 in (44 mm)
	2	44 Mag SJHP	15.6 g/240 gr.	1430±30 ft/s (436±10 m/s)	1.73 in (44 mm)
Levels for Hard Shields Only:					
III	1	7.62 mm NATO FMJ	9.6 g/148 gr.	2780±30 ft/s (847±10 m/s)	1.73 in (44 mm)

Product Specifications:

Model ……. MST2
Protection level …..NIJ-III
Steel… Astralloy, V2 armor plate, 0.25” thick
Glass …. Hawkins Glass, Laminated ballistic NIJ-3
Window area ….. 2 at 2 sq. ft. each
Caster wheels… 10” semi -pneumatic
Transport wheels size…. 8” with 4 - 1/2 lugs
Wheel lug nut torque…. 60 ft. lbs.
Total transport wheel size….18”
Transport tire max pressure…. 50 psi
Transport tires size…. 5.70-8, load range B, Cap. 715 lbs. ea.
Max height…. 75”
Max depth…. 56.5”
Max width inboard wheels…. 46”
Max width outboard wheels…. 59”
Weight, all attachments plus hitch bar…. 765 lbs.
Ball hitch size…..2”
Hitch pin….5/8”
Recommended vehicle hitch height…. 18”
Maximum safe transport speed… 35 mph
Transport wheels location….inboard or outboard, as per customer request
Window bolts and transport wheel flange plate….. Grade 8 bolts
Standard Color….. Powder Coat Black

Deployed Position – Rolling:

There are two positions for rolling:

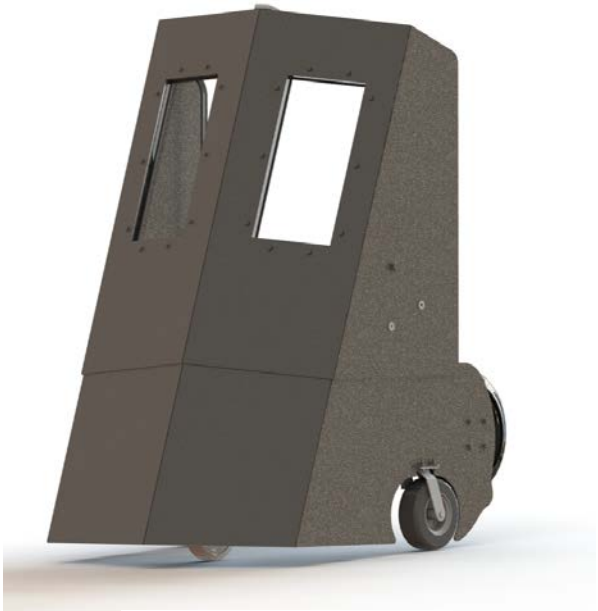
- Smooth Terrain
- Rough Terrain

Modes are changed by repositioning the brake lever.

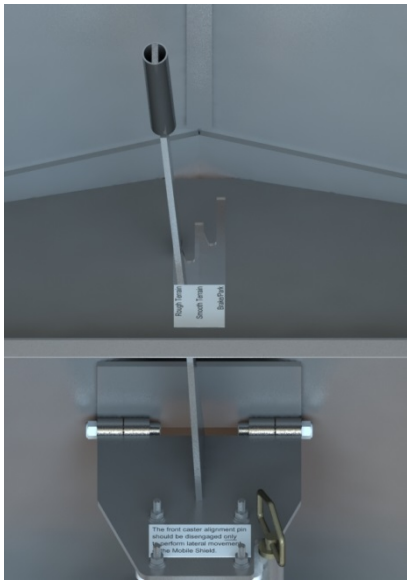
See pictures of brake lever below. Brake lever should be in the center position for smooth terrain. Brake lever should be in the left position for rough terrain. Place your foot on the front wheel caster tire while repositioning the brake lever.

Smooth Terrain Position

Smooth Terrain Brake Lever Position



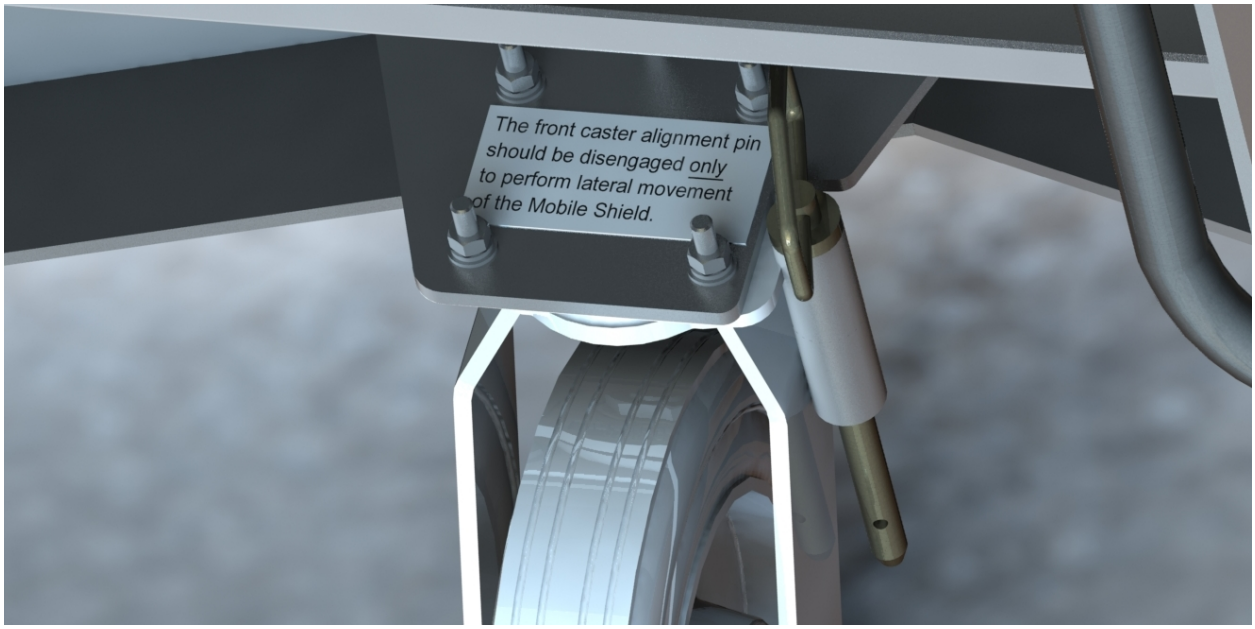
Rough Terrain Position



Rough Terrain Brake Lever Position

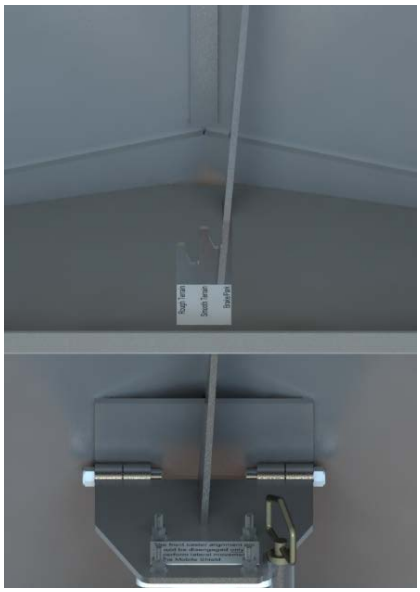
Deployed Position – Lateral Movement:

To move the Mobile Shield through narrow doorways, remove the front locking pin and push the unit sideways (lateral movement). Otherwise, locking pin should remain in place at all times.



Deployed Position – Brake/Park:

Brake/Park Position: Front of shield is on the ground



Brake/Park Lever Position

Folded Position:

WARNING: The rear caster alignment pins must be engaged prior to rotating the Mobile Shield from the deployed position to the folded, storage and towing positions. Upon redeployment, remove rear caster pins for proper mobility and steering.

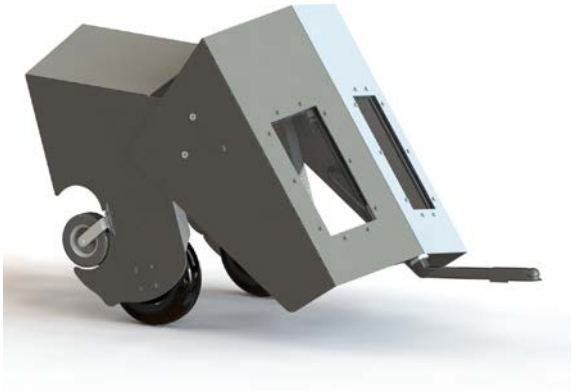
WARNING: Remove the threaded locking pins to rotate the upper shield and then reinstall locking pines. Locking pins must be tight at all times when moving or towing the Mobile Shield.

Storage Position:

The storage position was designed to keep the Mobile Shield's weight on the frame instead of the casters, which will prolong caster life. The threaded locking pins must be engaged prior to rotating the unit into or from the storage or towing positions to enable safe control of the unit. If pins are not reinstalled, the shield may unfold resulting in abrupt change in center of gravity that may cause serious bodily harm.

Towing Position:

Insert the tow bar, which is stowed at the base of the Mobile Shield, and rotate the unit onto the tires.



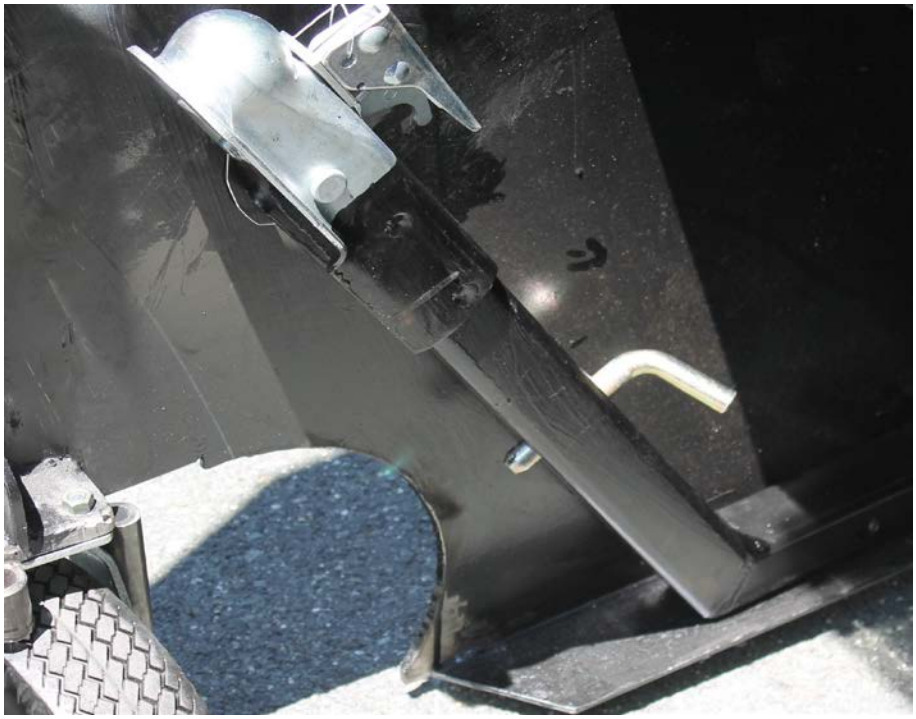
Moving from deployed position to towing position

Mobile shield is ready to transform:

1. Place locking pins in rear castors.

WARNING
The rear caster alignment pins must be engaged prior to rotating the Mobile Shield from the deployed position to the folded, storage and towing positions. Upon redeployment, remove rear caster pins for proper mobility and steering.

2. Remove hitch bar.



3. Remove both T-pins.

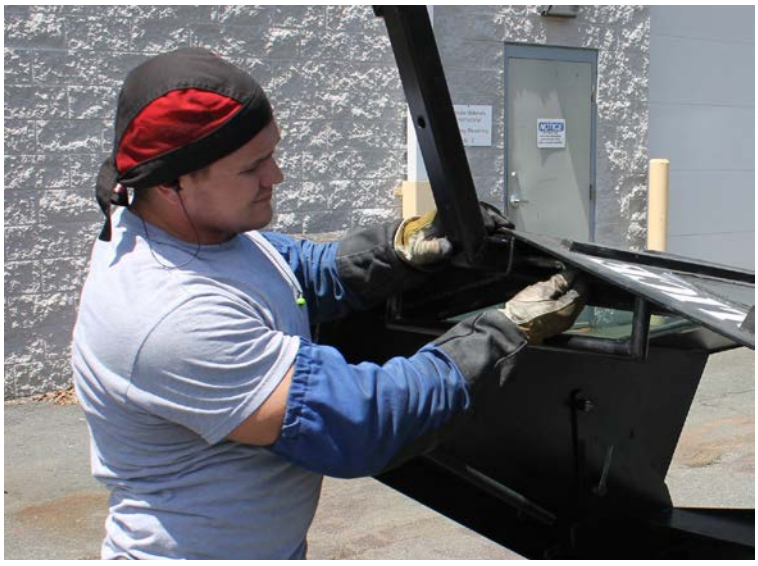
WARNING
Only remove the threaded locking pins to rotate the upper shield and then reinstall the locking pins. Locking pins must be tight at all times when moving or towing the Mobile Shield.

4. Fold unit over.

5. Replace T-pins.

6. Install hitch bar.

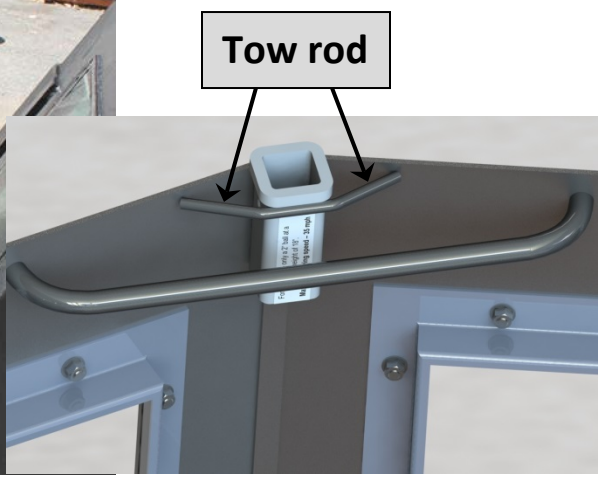
7. Install hitch pin.



8. Hitch to 2” ball; 18” hitch height recommended.

9. Install safety chain.

Attach the safety chain to the Mobile Shield’s tow rod and attach the opposite end to the appropriate location on the vehicle. Do not attach the chain to the handle bar.



10. Tow down the road, not to exceed 35 mph. Due to the narrow track of the travel tires, take corners carefully and slowly.

11. Upon arrival, reverse the above instructions. Remember that the T-pins must be secured in each and every position.

Interior Cleaning Instructions for Ballistic Glass

1. Rinse with clean water or glass cleaner to remove abrasive dust and dirt.
2. Wash with soap or mild detergent using a soft cloth - **DO NOT SCRUB**. Rinse and dry with a soft cloth.
3. To remove labels, stickers or grease, rub gently with a cloth wet thoroughly in VM & P naphtha, kerosene or isopropyl alcohol. Wash and rinse. Do **NOT** allow interior surface to come in contact with other solvents, razor blades, scrapers or squeegees.
4. For repair or replacement contact Hawkins Glass.

Email: angele@hawkinsglass.com, Phone: 703-339-2194.

Product Warranty

CMI will guarantee all workmanship to be free of defects for one year from date of shipment. This warranty covers welding, assemblies and moving parts, such as wheels and castors, from manufacturing defects. This does not cover damage from normal wear and tear, or misuse, abuse or damage caused by a hostile battle environment.

Any unauthorized changes made to the MST2 will void this warranty. Paint is not covered by this warranty. Items such as the glass will not be covered by CMI, but may be covered by the glass manufacturer's own warranty.

DISCLAIMER AND PRODUCT USE AGREEMENT

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